

a position sensor responsive to magnetic fields for generating signals for determining position and orientation coordinates of the catheter distal end.

C₂ Claim 14. (Amended) The system for percutaneous treatment of Claim 19, wherein the position sensor includes at least two non-coplanar magnetic elements.

S₁₄ C₂ Claim 83. (Amended) A method of treating a patient's heart comprising the steps of:

- B₃₁ (a) percutaneously inserting a catheter into a heart of a patient, the catheter having a proximal end and a distal end, an active portion at the distal end of the catheter for applying laser energy, and a position sensor responsive to magnetic fields for generating signals;
- (b) sensing the position of the catheter distal end using magnetic fields and the signals generated by the position sensor by determining position and orientation coordinates of the catheter distal end;
- (c) using the position sensor to reference the catheter distal end based on the position and orientation coordinates;
- (d) positioning the catheter such that its distal end is adjacent tissue of the heart to be treated based on the position and orientation coordinates; and
- (e) applying laser energy from the active portion to the patient's heart tissue.